

Application No.: 09/886,942
Page 9

AMENDMENT TO THE CLAIMS:

Pursuant to the proposed revisions to 37 C.F.R. § 1.121, please amend the claims as follows. The following listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

- 215
1. (Currently Amended) An isolated or recombinant nucleic acid comprising a polynucleotide sequence that has at least about 98% sequence identity to ~~the at least one~~ polynucleotide sequence ~~from the group consisting of SEQ ID NO:8 SEQ ID NO:1 to SEQ ID NO:18, or the~~ a complementary polynucleotide sequence thereof.
 2. (Currently Amended) The nucleic acid of claim 1, wherein said polynucleotide sequence promotes expression of a nucleic acid encoding a polypeptide to which the polynucleotide sequence is operably linked ~~at a level that is about equal to or greater than the level of expression of the polypeptide-encoding nucleic acid when the polypeptide-encoding nucleic acid is operably linked to a human CMV promoter polynucleotide sequence.~~
 3. (Currently Amended) The nucleic acid of claim 2, wherein said ~~polynucleotide sequence promotes expression of the polypeptide-encoding nucleic acid at a level that is about equal to or greater than the level of expression of the polypeptide-encoding nucleic acid when the polypeptide-encoding nucleic acid is operably linked to the human CMV promoter polynucleotide sequence shown in SEQ ID NO:19 or SEQ ID NO:20 is a Towne or AD169 human CMV promoter polynucleotide sequence.~~
 4. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises the a polynucleotide sequence ~~selected from the group consisting of SEQ ID NO:8 SEQ ID NO:1 to SEQ ID NO:18 or the~~ a complementary polynucleotide sequence thereof.
 5. (Canceled)
 6. (Canceled)

Application No.: 09/886,942
Page 10

7. (Currently Amended) The nucleic acid of claim 1, comprising a polynucleotide sequence that has at least about 99% sequence identity to the at least one polynucleotide sequence from the group consisting of SEQ ID NO:8 SEQ ID NO:11 to SEQ ID NO:18 or the a complementary polynucleotide sequence thereof.

8. (Currently Amended) The nucleic acid of claim 1, comprising a polynucleotide sequence that has at least about 99% sequence identity to the at least one polynucleotide sequence from the group consisting of SEQ ID NO:8 SEQ ID NO:11 to SEQ ID NO:18, or the a complementary polynucleotide sequence thereof, wherein said polynucleotide sequence promotes expression of a the polypeptide-encoding nucleic acid to which said polynucleotide sequence is operably linked at a level that is about equal to or greater than the level of expression of the polypeptide-encoding nucleic acid when the polypeptide-encoding nucleic acid is operably linked to the a human CMV promoter polynucleotide sequence shown in SEQ ID NO:19 or SEQ ID NO:20.

9. (Canceled)

10. (Currently Amended) An isolated or recombinant nucleic acid comprising a subsequence of the at least one polynucleotide sequence selected from the group consisting of SEQ ID NO:8 SEQ ID NO:11 to SEQ ID NO:18, said subsequence comprising nucleic acid residues at positions of the polynucleotide sequence of SEQ ID NO:8 corresponding to position 1 to about position 909 of the consensus sequence shown in Figures 8A-8I Figure 8, or the a complementary polynucleotide sequence thereof.

11. (Previously Amended) The nucleic acid of claim 10, wherein the subsequence promotes the expression of a nucleic acid encoding a polypeptide to which the subsequence is operably linked.

12. (Currently Amended) An isolated or recombinant nucleic acid comprising a polynucleotide sequence that hybridizes under highly stringent conditions over substantially the entire length of [a] the polynucleotide sequence of claim 1.

1815
Cnd

Application No.: 09/886,942
Page 11

13. (Canceled)

14. (Currently Amended) The nucleic acid of claim 1, ~~comprising a~~ wherein said polynucleotide sequence ~~that~~ promotes the expression of ~~a~~ the polypeptide-encoding nucleic acid ~~to~~ which said polynucleotide sequence is operably linked at a level that differs from the expression level of the polypeptide-encoding nucleic acid when the polypeptide-encoding nucleic acid is operably linked to ~~a nucleic acid sequence corresponding to~~ a human CMV promoter polynucleotide sequence shown in SEQ ID NO:19 or SEQ ID NO:20.

15. (Previously Amended) The nucleic acid of claim 14, wherein the polypeptide-encoding nucleic acid encodes luciferase, and the expression level is determined in an *in vitro* luciferase assay.

DIS
C. 31 +
16. (Previously Amended) The nucleic acid of claim 14, wherein the polypeptide-encoding nucleic acid encodes β -galactosidase, the polypeptide-encoding nucleic acid is expressed *in vivo*, and the expression level is determined by measuring the serum titer of anti- β -galactosidase antibodies.

17. (Currently Amended) The nucleic acid of claim 14, wherein the polynucleotide sequence promotes the expression of the polypeptide-encoding nucleic acid at a level that is higher than the highest expression level of the polypeptide-encoding nucleic acid when the polypeptide-encoding nucleic acid is operably linked to a human CMV promoter polynucleotide sequence shown in SEQ ID NO:19 or SEQ ID NO:20.

18. (Currently Amended) The nucleic acid of claim 17, wherein the polynucleotide sequence promotes the expression of the polypeptide-encoding nucleic acid at a level that is 2-fold higher than the highest expression level of the polypeptide-encoding nucleic acid when the polypeptide-encoding nucleic acid is operably linked to a human CMV promoter polynucleotide sequence shown in SEQ ID NO:19 or SEQ ID NO:20.

Application No.: 09/886,942

Page 12

19. (Canceled)

20. (Canceled)

21. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises a deletion of one or more nucleotide residues in a region of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleotide residue positions 830-835 or 841-844 of the consensus sequence shown in Figures 8A-8I Figure 8.

22. (Currently Amended) The nucleic acid of claim 21, wherein the nucleic acid comprises a deletion of nucleotide residues at positions of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleotide residue positions 830-835 or 841-844 of the consensus sequence.

315
cont
23. (Currently Amended) The nucleic acid of claim 22, wherein the nucleic acid comprises a deletion of the nucleotide residues at positions of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleotide residue positions 830-835 and 841-844 of the consensus sequence.

24. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises nucleotide residues of a Rhesus monkey CMV promoter polynucleotide sequence at positions of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleotide residue positions 817-863 of the consensus sequence shown in Figures 8A-8I Figure 8.

25. (Canceled)

26. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises an insertion of a nucleotide residue, as compared to the human Towne CMV promoter polynucleotide sequence shown in SEQ ID NO:20, after the nucleotide residue of the polynucleotide sequence of SEQ ID NO:8 corresponding to that positioned at position 853 of the consensus sequence shown in Figures 8A-8I Figure 8.

Application No.: 09/886,942

Page 13

27. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises a deletion of one or more nucleotide residues in a region of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleic acid residue positions 684-735 of the consensus sequence shown in Figures 8A-8I Figure-8.

28. (Currently Amended) The nucleic acid of claim 27, wherein the nucleic acid comprises a deletion of nucleotide residues of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleotide residue positions 684-735 of the consensus sequence.

29. (Canceled)

30. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid does not comprise nucleic acid residues beyond about the nucleotide residue position of the polynucleotide sequence of SEQ ID NO:8 corresponding to position 909 of the consensus sequence, numbered according to the consensus sequence shown in Figures 8A-8I Figure-8.

31. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises a polynucleotide sequence comprising nucleic acid residues at positions of the polynucleotide sequence of SEQ ID NO:8 corresponding to about position 1 to about position 930 of the consensus sequence shown in Figures 8A-8I Figure-8.

32. (Currently Amended) The nucleic acid of claim 31, wherein the nucleic acid does not comprise nucleic acid residues beyond about the nucleotide residue at the position of the polynucleotide sequence of SEQ ID NO:8 corresponding to position 930 of the consensus sequence shown in Figures 8A-8I Figure-8.

33. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises a polynucleotide sequence comprising nucleic acid residues at nucleic acid residue positions of the polynucleotide sequence of SEQ ID NO:8 corresponding to positions 1 to 932 of the consensus sequence shown in Figures 8A-8I Figure-8.

Application No.: 09/886,942

Page 14

34. (Currently Amended) The nucleic acid of claim 33, wherein the nucleic acid does not comprise nucleotide residues beyond the nucleotide residue of the polynucleotide sequence of SEQ ID NO:8 corresponding to position 932 of the consensus sequence shown in Figures 8A-8I ~~Figure-8~~.

35. (Currently Amended) The nucleic acid of claim 1, wherein the nucleic acid comprises a deletion of one or more nucleotide residues in a region of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleotide residue positions 319-512 of the consensus sequence shown in Figures 8A-8I ~~Figure-8~~.

36. (Currently Amended) The nucleic acid of claim 35, wherein the nucleic acid comprises a deletion of nucleotide residues of the polynucleotide sequence of SEQ ID NO:8 corresponding to about nucleotide residue positions 319-512 of the consensus sequence.

37. (Canceled)

38. (Canceled)

39. (Canceled)

40. (Canceled)

41. (Canceled)

42. (Canceled)

43. (Canceled)

44. (Previously Amended) The nucleic acid of claim 1, 10 or 12, wherein the polynucleotide sequence is operably linked to a nucleic acid encoding a polypeptide to form an expression cassette.

Application No.: 09/886,942
Page 15

45. (Previously Amended) The nucleic acid of claim 44, wherein the polypeptide-encoding nucleic acid encodes a viral polypeptide.

46. (Currently Amended) The nucleic acid of claim 44, wherein the polypeptide-encoding nucleic acid encodes a polypeptide selected from the group consisting of an immunogen, an immunomodulatory molecule, an antigen, an adjuvant, an allergen, an antibody, a bacterial toxin, a cytokine, a cytokine receptor, an enzyme, and a co-stimulatory molecule.

47. (Previously Amended) The nucleic acid of claim 46, wherein the polypeptide-encoding nucleic acid encodes an antigen selected from the group consisting of a cancer antigen, a hepatitis B surface antigen, a hepatitis A antigen, and a hepatitis C antigen.

48. (Previously Amended) The nucleic acid of claim 46, wherein the polypeptide-encoding nucleic acid encodes a co-stimulatory polypeptide that binds to a CD28 or CTLA-4 receptor.

49. (Canceled)

50. (Canceled)

51. (Canceled)

52. (Canceled)

53. (Canceled)

54. (Canceled)

55. (Canceled)

56. (Canceled)

Application No.: 09/886,942

Page 16

57. (Canceled)

58. (Canceled)

59. (Canceled)

60. (Canceled)

61. (Canceled)

62. (Currently Amended) A vector comprising at least one nucleic acid of claim 1,
10, or 12 ~~or 44~~.

63. (Original) The vector of claim 62, wherein the vector is an expression vector.

64. (Original) The vector of claim 62, wherein the vector is selected from a
plasmid, a cosmid, a phage, a virus or fragment thereof, a bacterial artificial chromosome (BAC), a
yeast artificial chromosome (YAC).

65. (Currently Amended) A cell comprising the nucleic acid of claim 1, 10, or 12
~~or the vector of claim 63~~.

66. (Original) The cell of claim 65, wherein the cell comprises a human cell.

67. (Canceled)

68. (Canceled)

69. (Canceled)

70. (Canceled)

Application No.: 09/886,942

Page 17

71. (Canceled)

72. (Canceled)

73. (Canceled)

74. (Previously Amended) A method of producing a polypeptide, the method comprising:

(a) providing a population of cells comprising a nucleic acid of claim 1, 10, or 12 operably linked to a nucleic acid encoding a polypeptide; and

(b) expressing the polypeptide in at least the subset of the population of cells or progeny thereof.

75. (Previously Amended) The method of claim 74, wherein the population of cells is provided by introducing the nucleic acid operably linked to the polypeptide-encoding nucleic acid into the population of cells.

76. (Original) The method of claim 74, further comprising isolating the polypeptide from the cells.

77. (Original) The method of claim 74, wherein the cells are in culture.

78. (Original) The method of claim 77, comprising expressing the polypeptide by culturing the population or subset of the population of cells or progeny thereof in a nutrient medium under conditions in which the nucleic acid promotes expression of the polypeptide.

79. (Original) The method of claim 78, further comprising isolating or recovering the polypeptide from the cells or from the nutrient medium.

Please cancel claims 80-92 without prejudice to subsequent renewal.

Application No.: 09/886,942

Page 18

44. 93. (Currently Amended) A kit comprising a nucleic acid of claim 1, 10, or 12, ~~or~~
94. (Currently Amended) A kit comprising a vector of claim 62 ~~or~~ 63.
95. (Canceled)
96. (Canceled)
97. (Canceled)
98. (Canceled)
99. (Canceled)
100. (Canceled)
101. (Canceled)
102. (Canceled)
103. (Canceled)
104. (Canceled)
105. (Currently Amended) The nucleic acid of claim 10, wherein the subsequence promotes expression of a nucleic acid encoding a polypeptide at a level about equal to or greater than the level of expression of the polypeptide-encoding nucleic acid when the polypeptide-encoding nucleic acid is operably linked to a human CMV promoter polynucleotide sequence selected from SEQ ID NO:19 or SEQ ID NO:20.
106. (Currently Amended) An isolated or recombinant nucleic acid comprising a polynucleotide sequence that has at least about 98% sequence identity to the a nucleotide sequence

B15
cont

Application No.: 09/886,942

Page 19

~~as given in any~~ of SEQ ID NO:8 ~~SEQ ID NOS 1-18~~ but lacks the nucleotide residues corresponding to the first exon, or ~~the [a]~~ complementary polynucleotide sequence thereof.

107. (Currently Amended) The nucleic acid of claim 1, wherein the polynucleotide sequence or complementary polynucleotide sequence thereof promotes expression of a polypeptide-encoding the polynucleotide-encoding nucleic acid in a mammalian cell, wherein said polypeptide is capable of inducing ~~sufficient to induce~~ an immune response.

108. (New) An isolated or recombinant polynucleotide comprising a polynucleotide sequence having at least 99% sequence identity to the polynucleotide sequence of SEQ ID NO:8 or the complementary sequence thereof.

109. (New) The polynucleotide of claim 108, wherein said polynucleotide sequence promotes expression of a nucleic acid encoding a polypeptide to which the polynucleotide sequence is operably linked.

BIS
cont
110. (New) The polynucleotide of claim 108, comprising a polynucleotide sequence having at least 99.5% sequence identity to the polynucleotide sequence of SEQ ID NO:8, or the complementary sequence thereof.

111. (New) The polynucleotide of claim 109, wherein said polynucleotide sequence promotes expression of a nucleic acid encoding a polypeptide to which the polynucleotide sequence is operably linked.

112. (New) An isolated or recombinant nucleic acid comprising a polynucleotide sequence that hybridizes under highly stringent conditions over substantially the entire length of the polynucleotide sequence of claim 108.

113. (New) A vector for expression of a polypeptide in a mammalian cell comprising a promoter, said promoter comprising a polynucleotide sequence having at least 99% sequence identity to the sequence of SEQ ID NO:8, wherein said promoter is capable of directing transcription of a heterologous coding sequence operably linked downstream of the polynucleotide sequence of the promoter.

Application No.: 09/886,942
Page 20

114. (New) The vector of claim 112, wherein the polynucleotide sequence of the promoter is linked directly to the heterologous coding sequence.

115. (New) The vector of claim 112, further comprising an origin of replication positioned upstream of and operably linked to the polynucleotide sequence of the promoter.

116. (New) The vector of claim 112, further comprising a polyadenylation region positioned downstream of and operably linked to the polynucleotide sequence of the promoter.

117. (New) A vector for expression of a polypeptide in a mammalian cell, comprising

(a) an upstream origin of replication;

(b) a downstream polyadenylation region; and

(c) a promoter interposed between the origin of replication and the polyadenylation region, said promoter comprising a polynucleotide sequence having at least 99% sequence identity to the polynucleotide sequence of SEQ ID NO:8, wherein said promoter is capable of directing transcription of a polypeptide-encoding nucleotide sequence positioned downstream of and operably linked to the polynucleotide sequence of the promoter.

118. (New) A cell transfected with a vector comprising a first polynucleotide sequence having at least 99% sequence identity to the polynucleotide sequence of SEQ ID NO:8 and a second polynucleotide sequence operably linked to and positioned downstream of said first polynucleotide sequence.

119. (New) The cell of claim 117, wherein the cell is a mammalian cell.

These amendments are made without prejudice and are not to be construed as abandonment of the previously claimed subject matter or agreement with any objection or rejection of record.